

## Product datasheet for **RC223089**

### DMGDH (NM\_013391) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	DMGDH (NM_013391) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DMGDH
Synonyms:	DMGDHD; ME2GLYDH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC223089 representing NM\_013391  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCTCCGTCGCCGCGCAGCTGCTGCGGGCCCTCTGCTGCGGAGCTGCCCGTGCAGGGCTCCCCG  
 GCGCCCCGCGCTCTGTCTGCGGCCGGGAAGGAGAGGAAAAACCACCCCTTATCTGCAGAAACAATGGAA  
 AGACAGAGCAGAAACAGTGATAATTGGAGGTGGCTGTGTTGGTGTGAGTCTGGCTTATCACCTGGCCAAA  
 GCAGGGATGAAAGATGTGGTCTGCTGGAGAAATCAGAGCTCACGGCTGGATCTACCTGGCACGCAGCAG  
 GTTTAACAACTTACTTTTCATCCTGGAATAAACTTGAAGAAAAACATTATGATAGCATCAAACCTTTATGA  
 GAAACTGGAAGAAGAACTGGTCAGGTGGTGGGATTCCATCAGCCAGGTAGTATCAGACTTGCTACCACC  
 CCTGTAAGGGTAGATGAATTTAAATATCAAATGACTCGGACTGGCTGGCATGCAACAGAACAGTATCTCA  
 TTGAACCTGAAAAAATCAAGAGATGTTCCCTTACTCAACATGAATAAGGTTTTAGCTGGATTGTATAA  
 TCCTGGAGATGGTCACATTGATCCTTATCTCTAACTATGGCACGCTGGCTGCTGGGGCTAGGAAATGGT  
 GCCCTTTTAAAAATATCCTGCACCAGTAACCTTCTCTGAAAGCCAGGTGAGATGGAACATGGGACGTTGAAA  
 CACCACAGGGTCTATGAGAGCAATAGAATTGTGAATGCTGCAGGATTTGGGCTCGTGAAGTAGGTAA  
 AATGATTGGACTAGAACATCCTCTCATTCCGGTCAACATCAATATGTTGTTACATCGACTATATCTGAA  
 GTGAAAGCTTTGAAACGAGAAGTGCCTGTGCTCCGTGACCTGGAAGGATCATATTATCTCCGACAGGAAA  
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 TGGAGTTCCTCCAGGTTTTGAAAGGAACTCTTGGTCTGATCTAGATCGAATCATGGAACACATCAA  
 GCTGCCATGGAATGGTTCCTGTCTTGAAGGCTGACATCATCAATGTTGCAATGGTCTATCACGTT  
 ATTCTCCTGACATTCGCTATGGTGGGGCCCCATCAGGGGGTCAAGAACTACTGGGTGGCTATAGGCTT  
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 CCTTTTGTCTGATAGAATTGGATCCTAATCGCTATGGCAATGGACAACAACCCAGTACACTGAGGCCA  
 AAGCAAGAGAATCATATGGATTCAACAATATTGTTGGTTATCCTAAAGAAGAACGGTTTGTGGGAGGCC  
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 GAGCAGCCGCACTGGTTCTACAACCAGGCCAGGACACTCAGTACAGGCCAAGTTTTCGCCGCACAACT  
 GGTGGAGCTGTGGCTCGGAGTATAACAGGTTATGCAAGAGTAGCGGTAACGACCTATCACCAT  
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 AAGGTGGGTTTTACAAATATAAGTCACATGTTAACACCCAAGGGTCGAGTGTATGCTGAGCTGACTGTT  
 CTCACCAATCTCCTGGGAGTTTTCTTTAATTACTGGCTCTGGATCAGAACTTCATGATCTTAGATGGAT  
 TGAAGAAGAAGCAGTCAAAGGTGGATATGATGTTGAAATTAACAACTGATGAGCTTGGAGTTCTT  
 GGAGTTGCTGGGCCACAGGCAAGAAAGGCTCCTTCAGAACTGACCTCTGAAGATCTTAGTGATGATGTT  
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 GTTAAATAAGCCAGCAGACTTCATAGGAAAGCAAGCACTGAAACAGATTAAGCCAAGGGGCTGAAACGA  
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 GTCATCATACAAGAACCTTTGGTATTGACCGAACCAACCAGAAACCGGCTTCAGAAAAAAGGTGGAAGG  
 ACAAACCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC223089 representing NM\_013391  
 Red=Cloning site Green=Tags(s)

MLRPGAQLLRGLLLRSCPLQGSPPRPSVCGREGEEKPPLSAETQWKDRAETVIIGGGCVGVSLAYHLAK  
 AGMKDVLLEKSELTAGSTWHAAGLTTYFHPGINLKKIHYDSIKLYEKLEETGQVVGFHQPGSIRLATT  
 PVRVDFEKYQMTRTGWHATEQYLIEPEKIQEMFPLLNMNKVLAGLYNPGDGHIDPYSLTMALAAGARKCG  
 ALLKYPAPVTSLKARSDGTWDVETPQGSMRANRIVNAAGFWAREVGKMIGLEHPLIPVQHQQYVVTSTISE  
 VKALKRELPVLRDLEGSYYLRQERDGLLFGPYESQEKMKVQDSWVTNGVPPGFGKELFESDLDRIMEHIK  
 AAMEMVPLKKAIDIINVVNGPITYSPDILPMVGP HQGVRNYWVAIGFGYGIHAGGVGKYLSDWILHGEP  
 PFDLIELDPNRYGKWTTTYTEAKARESYGFNNIVGYPKEERFAGRPTQRVSGLYQRLESKCSMGFHAGW  
 EQPHWFYKPGQDTQYRPSFRRTNWFEPVGEYKQVMQVAVTDLSPFGKFNKGGQDSIRLLDHLFANVIP  
 KVGFTNISHLTPKGRVYAEITVSHQSPGEFLITGSGSELHDLRWIEEEAVKGGYDVEIKNITDELGVL  
 GVAGPQARKVLQKLTSEDLSDVFKFLQTKSLKVSNIPTAIRISYTGELGWELYHRREDSVALYDAIMN  
 AGQEEGIDNFGTYAMNLRLEKAFRAWGLEMNCDTNPLEAGLEYFVKLNKPADFIGKQALKQIKAKGLKR  
 RLVCLTLATDDVDPEGNESIYWNGKVVGNNTTSGSYSYSIQKSLAFAYVPVQLSEVQQQVEVELLGNYPYA  
 VIIQEPLVLTPTNRNLQKKGKDKT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

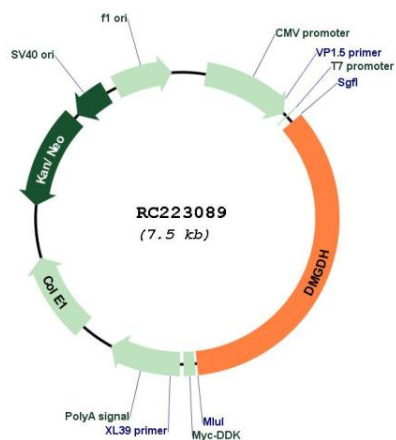
SgfI-MluI

**Cloning Scheme:**



<b>ACCN:</b>	NM_013391
<b>ORF Size:</b>	2598 bp
<b>OTI Disclaimer:</b>	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_013391.3</a>
<b>RefSeq Size:</b>	3104 bp
<b>RefSeq ORF:</b>	2601 bp
<b>Locus ID:</b>	29958
<b>UniProt ID:</b>	<a href="#">Q9UI17</a>
<b>Cytogenetics:</b>	5q14.1
<b>Domains:</b>	DAO, GCV_T
<b>Protein Pathways:</b>	Glycine, serine and threonine metabolism, Metabolic pathways
<b>MW:</b>	96.81 kDa
<b>Gene Summary:</b>	This gene encodes an enzyme involved in the catabolism of choline, catalyzing the oxidative demethylation of dimethylglycine to form sarcosine. The enzyme is found as a monomer in the mitochondrial matrix, and uses flavin adenine dinucleotide and folate as cofactors. Mutation in this gene causes dimethylglycine dehydrogenase deficiency, characterized by a fishlike body odor, chronic muscle fatigue, and elevated levels of the muscle form of creatine kinase in serum. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2013]

Product images:



Circular map for RC223089